



Merang



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ABSTRACT & PROGRAMME BOOK

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THROUGH GEOHERITAGE**

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MANAGEMENT OF SOUTHERN MOUNTAIN OF JAVA ISLAND AS GEOHERITAGE BY DEVELOPING SWEET SORGHUM CROP

Mohammad Nurcholis^{1*}, Aulia Puspitaningrum² & Henri Krismawan³

¹Department of Soil Science, Universitas Pembangunan Nasional Veteran Yogyakarta, JL. SWK 104 Ring Road, Yogyakarta, 55283 Indonesia.

²Department of Agribusiness, Universitas Pembangunan Nasional Veteran Yogyakarta, JL. SWK 104 Ring Road, Yogyakarta, 55283 Indonesia.

³Sustainable Development Strategy Institute, Prancak, Dukuh, Sewon, Bantul, Yogyakarta 55188 Indonesia.

*Corresponding author: nurcholis@upnyk.ac.id

ABSTRACT

The Southern Mountain is one of several Geological Heritages in Java Island that has many cultural and aesthetic values. However, there are some constraints in using this area especially for agriculture practices for marginal lands that are widely distributed in this area. Therefore it needs specific kind of crops that are able to be adaptively in the marginal lands and draught stress, and here it is chosen sweet sorghum that also called as multipurpose plants. This research was aimed to find out the productivity potential of the sweet sorghum plant in marginal land of the Southern Mountain as geoheritage area in Yogyakarta. This study was conducted by analyzing the land potential for developing the sweet sorghum cultivation, and also plot experiment for growing sweet sorghum in marginal soils developed on the tertiary rocks on Karst Topography and on the Volcanic Breccia. As for comparison, it was also growing sorghum on the Young Merapi volcanic materials. There were analyzed the vegetative product such us stem and leaves of sorghum plant, and the generative products of sorghum seeds. Downstream the products of sorghum were also done by processing the results of sorghum stems, leaves and seeds. The study results showed that productivity of sweet sorghum stem was in the range of 30-35 tons/ha and for seed was 3-3.5 ton/ha. Downstream product from sorghum stem sorghum was done by pressing and resulting sap (40%) for the production of ethanol as biofuel, and also liquid sugar. Leaves and stem waste are processed resulting animal feed. The sorghum seeds are processed resulting healthy foodstuffs. Overall the development of sweet sorghum in the area studied might potentially develop the agroindustry of rural communities in the geoheritage area.

Key words: geoheritage, marginal land, sweet sorghum, agroindustry.